Individual Site Placement (Electrical)

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Electrical Service Connection

Electrical Responsibilities

- Knowledgeable with National Electric Code (NEC), NFPA 70.
- Coordination, coordination, coordination.
- Multitasking
- Proactive
- Flexible

Up Front Work

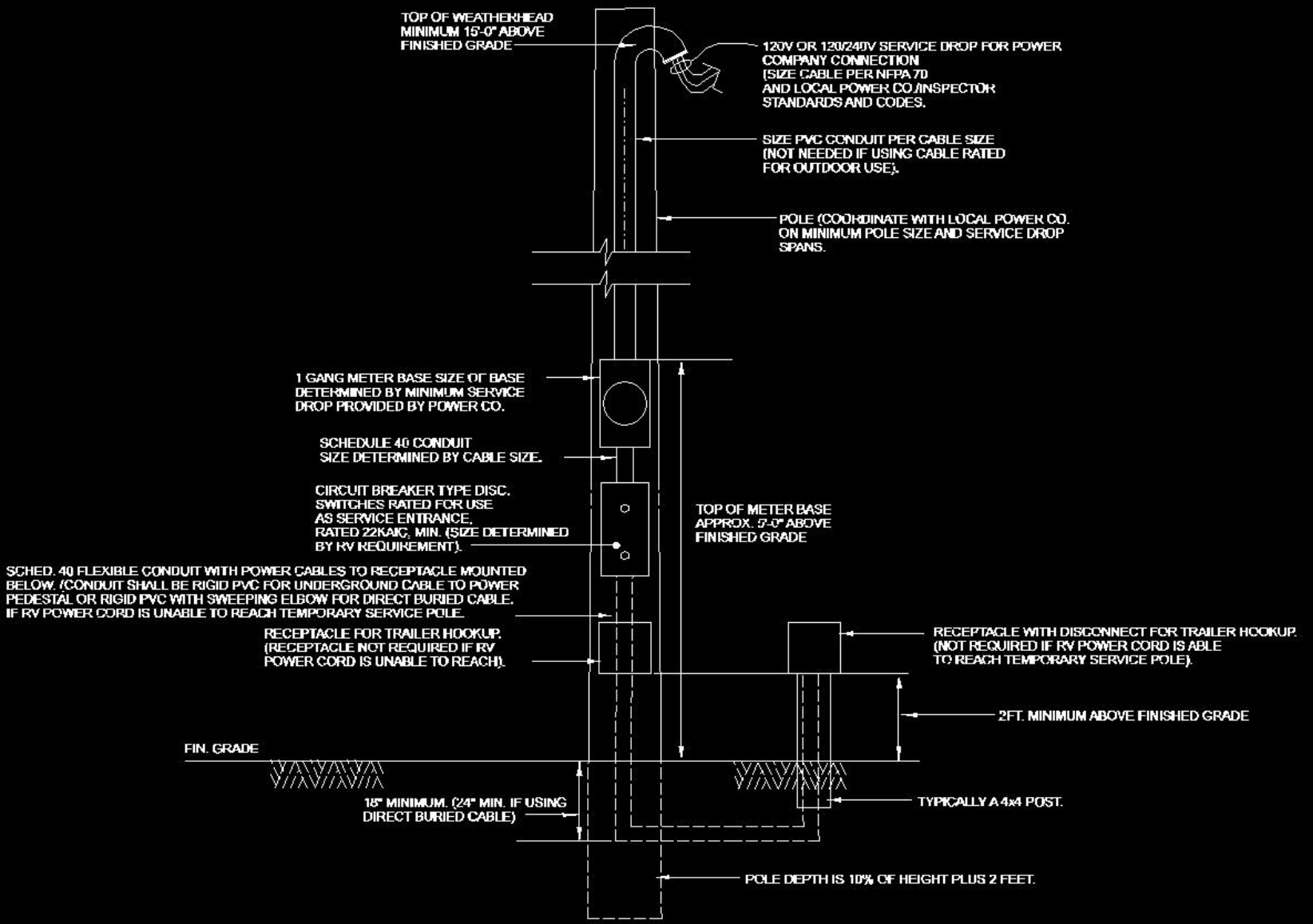
- Meet with local power co. and local inspector (Authority Having Jurisdiction-AHJ).
  - Determine and obtain local standards and codes.
    - Minimum service connection.
    - Grounding requirements.
    - Obtain clearances (private and public) like road crossings from power co. This may require a taller pole in some instances.
  - Determine service connection procedures.
    - Who calls local inspector?
    - Who calls power company?

Specifications

- Specifications will reflect (NEC) and reflect local standards and codes.
  - Power co.’s have minimum service connections and some local AHJ’s have different grounding requirements.

Technical Details

- Technical details (a typical) should be provided to illustrate minimum contract requirements.
  - Determine power requirements and connections for trailers, typically 120V, 30A, single phase, 3-wire, however, handicap trailers are typically 120/240V 50A, single phase, 4-wire.
  - This will allow a basis for the contractor to bid on the work.
  - This will prevent rejection of work by local inspectors due to insufficient work performed by contractor.


TOP OF WEATHERHEAD
MINIMUM 15'-0" ABOVE
FINISHED GRADE
120V OR 120/240V SERVICE DROP FOR POWER
COMPANY CONNECTION
(SIZE CABLE PER NFPA 70
AND LOCAL POWER CO./INSPECTOR
STANDARDS AND CODES.
SIZE PVC CONDUIT PER CABLE SIZE
(NOT NEEDED IF USING CABLE RATED
FOR OUTDOOR USE).
POLE (COORDINATE WITH LOCAL POWER CO.
ON MINIMUM POLE SIZE AND SERVICE DROP
SPANS.
1 GANG METER BASE SIZE OF BASE
DETERMINED BY MINIMUM SERVICE
DROP PROVIDED BY POWER CO.
SCHEDULE 40 CONDUIT
SIZE DETERMINED BY CABLE SIZE.
CIRCUIT BREAKER TYPE DISC.
SWITCHES RATED FOR USE
AS SERVICE ENTRANCE.
RATED 22KAIC, MIN. (SIZE DETERMINED
BY RV REQUIREMENT).
TOP OF METER BASE
APPROX. 5'-0" ABOVE
FINISHED GRADE
SCHED. 40 FLEXIBLE CONDUIT WITH POWER CABLES TO RECEPTACLE MOUNTED
BELOW. (CONDUIT SHALL BE RIGID PVC FOR UNDERGROUND CABLE TO POWER
PEDESTAL OR RIGID PVC WITH SWEEPING ELBOW FOR DIRECT BURIED CABLE.
IF RV POWER CORD IS UNABLE TO REACH TEMPORARY SERVICE POLE.
RECEPTACLE FOR TRAILER HOOKUP.
(RECEPTACLE NOT REQUIRED IF RV
POWER CORD IS UNABLE TO REACH).
RECEPTACLE WITH DISCONNECT FOR TRAILER HOOKUP.
(NOT REQUIRED IF RV POWER CORD IS ABLE
TO REACH TEMPORARY SERVICE POLE).
2FT. MINIMUM ABOVE FINISHED GRADE
FIN. GRADE
18" MINIMUM. (24" MIN. IF USING
DIRECT BURIED CABLE)
TYPICALLY A 4x4 POST.
POLE DEPTH IS 10% OF HEIGHT PLUS 2 FEET.

TEMPORARY SERVICE METERING POLE

WORK TO BE PERFORMED BY CONTRACTOR

Service Pole Placement

- Pole location should be marked and as a rule of thumb shall be no further than 90 feet from nearest distribution transformer.
  - Locate to prevent obstructions between service pole and transformer.
  - Recommend using a range finder to check distances.
  - Do not pull service drops over residences or temporary trailer.

Service Pole vs. Wire to Existing

- New service pole or existing wiring?
  - Recommend new service pole.
    - Prevents issues with potential wiring deficiencies to existing wiring.
    - In some cases, the residence may be destroyed.
  - Not always feasible to use service pole; therefore, connect to existing wiring.
    - Cannot drop service over the residence or temporary trailer.
    - Panelboard may be on the outside of the house.

Trailer Receptacle locations

- Where do you locate power receptacle?
  - On service pole?
    - If RV power cord **will** reach service pole without extension cord.
  - On a pedestal?
    - When RV power cord **will not** reach service pole.
    - When using existing wiring at house.

Special Considerations

- Voltage drop
  - Typically cable runs over 90 feet will result in a voltage drop at full load.
    - Electrical Engineer will perform voltage drop/load center calculation.
  - Use extension cords in “have to” situations.
    - An area you can’t trench, i.e. a concrete porch, **not** driveways.
  - Attaching power receptacle to a residence.
    - Get permission, preferably in writing.